

That Which is Claimed is:

1. A fiber cement felt, comprising:

a fabric including:

a set of fine top machine direction yarns;

a set of coarse bottom machine direction yarns; and

a set of fine cross machine direction yarns interwoven with the top and bottom machine direction yarns in a plurality of repeat units; and

a batt layer overlying and attached to the set of top machine direction yarns of the fabric.

2. The fiber cement felt defined in Claim 1, wherein the bottom machine direction yarns are twists selected from the group consisting of: spun yarns; cross-linked yarns; multifilaments; core wrapped yarns; and combinations thereof.

3. The fiber cement felt defined in Claim 1, wherein the bottom machine direction yarns are sized between about 300 and 4,500 dtex.

4. The fiber cement felt defined in Claim 1, wherein the cross machine direction yarns are selected from the group consisting of: single monofilaments and monofilament twists.

5. The fiber cement felt defined in Claim 1, wherein the cross machine direction yarns are sized between about 0.2 and 1.0 mm in diameter.

6. The fiber cement felt defined in Claim 1, wherein the top machine direction yarns are selected from the group consisting of: single monofilaments and monofilament twists.

7. The fiber cement felt defined in Claim 1, wherein the top machine direction yarns are sized between about 0.3 and 1.0 mm in diameter.

8. The fiber cement felt defined in Claim 1, wherein the ratio of top machine direction yarns to bottom machine direction yarns is between 2:1 and 5:1.

9. The fiber cement felt defined in Claim 1, further comprising a batt layer attached to and underlying the bottom machine direction yarns.

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10. The fiber cement felt defined in Claim 1, wherein the set of top machine direction yarns includes upper and lower top machine direction yarns interwoven with the cross machine direction yarns, such that the felt is a triplex felt.

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11. The fiber cement felt defined in Claim 10, wherein in each repeat unit, each cross machine direction yarn forms two knuckles below bottom machine direction yarns.

12. The fiber cement felt defined in Claim 11, wherein the knuckles are separated by one bottom machine direction yarn.

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13. The fiber cement felt defined in Claim 10, wherein in each repeat unit, only one knuckle is formed by a CMD yarn over each upper top machine direction yarn.

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14. The fiber cement felt defined in Claim 1, wherein the set of top machine direction yarns is positioned such that the felt is a duplex felt.

15. The fiber cement felt defined in Claim 14, wherein in each repeat unit, each cross machine direction yarn forms two knuckles below bottom machine direction yarns.

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16. The fiber cement felt defined in Claim 15, wherein the knuckles are separated by one bottom machine direction yarn.

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17. The fiber cement felt defined in Claim 14, wherein in each repeat unit, two separate knuckles are formed by cross machine direction yarns over each top machine direction yarn.

18. The fiber cement felt defined in Claim 14, wherein in each repeat unit, each cross machine direction yarn forms multiple two-knuckle floats over adjacent top machine direction yarns.

5 19. A method of forming a fiber cement article, comprising the steps of:

(a) providing a fiber cement felt, the fiber cement felt comprising:

a fabric including:

a set of fine top machine direction yarns;

a set of coarse bottom machine direction yarns; and

10 a set of fine cross machine direction yarns interwoven with the top and bottom machine direction yarns in a plurality of repeat units; and

a batt layer overlying and attached to the set of top machine direction yarns of the fabric;

(b) depositing a fiber cement slurry on the fiber cement felt; and

15 (c) removing moisture from the slurry.

20 20. The method defined in Claim 19, wherein the bottom machine direction yarns are twists selected from the group consisting of: spun yarns; cross-linked yarns; multifilaments; core wrapped yarns; and combinations thereof.

21. The method defined in Claim 19, wherein the bottom machine direction yarns are sized between about 300 and 4,500 dtex.

25 22. The method defined in Claim 19, wherein the cross machine direction yarns are selected from the group consisting of: single monofilaments and monofilament twists.

23. The method defined in Claim 19, wherein the cross machine direction yarns are sized between about 0.2 and 1.0 mm in diameter.

30 24. The method defined in Claim 19, wherein the top machine direction yarns are selected from the group consisting of: single monofilaments and monofilament twists.

25. The method defined in Claim 19, wherein the top machine direction yarns are sized between about 0.3 and 1.0 mm in diameter.

5 26. The method defined in Claim 19, wherein the ratio of top machine direction yarns to bottom machine direction yarns is between 2:1 and 5:1.

27. The method defined in Claim 19, further comprising a batt layer attached to and underlying the bottom machine direction yarns.

10 28. The method defined in Claim 19, wherein the set of top machine direction yarns includes upper and lower top machine direction yarns interwoven with the cross machine direction yarns, such that the felt is a triplex felt.

15 29. The method defined in Claim 28, wherein in each repeat unit, each cross machine direction yarn forms two knuckles below bottom machine direction yarns.

30. The method defined in Claim 29, wherein the knuckles are separated by one bottom machine direction yarn.

20 31. The method defined in Claim 28, wherein in each repeat unit, only one knuckle is formed by a CMD yarn over each upper top machine direction yarn.

25 32. The method defined in Claim 19, wherein the set of top machine direction yarns is positioned such that the felt is a duplex felt.

33. The method defined in Claim 32, wherein in each repeat unit, each cross machine direction yarn forms two knuckles below bottom machine direction yarns.

30 34. The method defined in Claim 33, wherein the knuckles are separated by one bottom machine direction yarn.

35. The method defined in Claim 32, wherein in each repeat unit, two separate knuckles are formed by cross machine direction yarns over each top machine direction yarn.

36. The method defined in Claim 32, wherein in each repeat unit, each cross machine direction yarn forms multiple two-knuckle floats over adjacent top machine direction yarns.